



Hanford Tank Farms Vadose Zone Monitoring Project Quarterly Summary Report for 4th Quarter/Year End FY 2001

Introduction

Routine quarterly reports for the Hanford Tank Farms Vadose Zone Project (VZMP) are issued to summarize the results of logging performed, provide the status of any on-going special investigations, and provide an updated listing of borehole intervals where logging is planned in the coming months.

Logging operations for the project were started during June 2001. Although weekly project management reports regarding the status of the VZMP have been submitted, a more detailed summary has not yet been issued. Coordination of activities, assessing the effectiveness of scheduling, and determining appropriate analysis techniques have required special attention to achieve continuity for a project that is repetitive and routine in nature. Therefore, this first quarterly report is intended to update the relevant aspects and progress of the project from its inception.

VZMP Logging Results

A summary of logging operations from June 19 to September 30, 2001 is included in Table 1 below.

Table 1. Summary of Logging Operations

Month	June	July	August	September	FY Cumulative Total
Total Boreholes	21	35	30	27	113
Main Log Footage	781	1943	1860	1429	6013
Rerun Log Footage	104	142	90	78	414
Total Footage	885	2085	1950	1507	6427

Table 2 provides further details of operations including borehole number, tank number, logging depths and footage, the Radionuclide Assessment System (RAS) detector size (small, medium, large), total score, projected next logging date, the RAS logging date, and a comment section. This table is derived from the database "Prioritized Listing of Borehole Monitoring Intervals" included in the Baseline Monitoring Plan issued June 2001 (DOE 2001). The database is continually updated as boreholes are logged. The most important change that occurs in the database is the log frequency. Where apparent changes that suggest possible contaminant movement are indicated by the RAS, the log frequency is changed to quarterly monitoring. The frequency for apparent changes that have been noted from spectral gamma repeat logging or from assessments by Randall and Price (e.g., Randall and Price 2001) remain at a monitoring frequency of six months, except where noted in the comment section.

In the interest of brevity, plots for which no apparent change was observed will not be included in this report. These logs are available on request.

Since June 2001, possible contaminant movement has been identified in nine boreholes (60-07-01, 60-07-10, 60-07-11, and 60-04-08 in U Farm and 50-06-02, 50-06-03, 50-09-01, 50-09-10, and 50-01-09 in T Farm). The attached plots show a comparison of the current RAS and the Spectral Gamma Logging System (SGLS) baseline total gamma profiles for these boreholes and indicate the depth intervals of suspected contaminant movement.

Identification of contaminant movement in U Farm is based on comparison of current SGLS logs with baseline data and indicates downward migration of ^{238}U and ^{235}U during the period from 1995 to 2001. Comparison of SGLS data collected in 1995, 1999, and 2001 in three boreholes clearly shows downward movement of uranium contamination over this time period. Comparison of RAS data with SGLS data also indicates movement in a fourth borehole. The four boreholes define a discrete area between tanks U-107 and U-104. RAS monitoring of these boreholes will be implemented on a quarterly basis, and a Special Report is being prepared to document this migration.

Identification of possible contaminant migration in T Farm is based on comparison of RAS data with baseline data collected with the SGLS. Because this involves comparing response from two different detectors with different response characteristics, the degree of confidence in the identification is somewhat less relative to U Farm. The boreholes in T Farm do not define a discrete area. These boreholes have also been placed on a quarterly monitoring schedule and future comparisons between successive RAS logs are expected to provide more definitive information.

Since the beginning of the project, one or more regions of high gamma flux have been identified to exist in 11 boreholes. A high rate logging system (HRLS) is required to collect data in these boreholes to assess potential changes. It is recommended a number of these boreholes be accumulated before special logging with the high rate logging system is initiated. Once additional RAS runs are available, it will be possible to make a more reliable comparison.

Special Investigations

A special investigation of boreholes around tank U-107 was requested by the DOE-ORP Project Manager to support waste retrieval operations conducted by CH2M Hill Hanford Group (CHG). Three boreholes in U Farm (60-07-01, 60-07-10, and 60-07-11), were logged with the SGLS to document any contaminant migration in the vicinity that may have occurred since the last logging event approximately two years ago. The RAS was also used to log these three boreholes in addition to other selected boreholes in the farm. Preliminary results from logging with both systems suggest contaminant movement continues to occur in the three boreholes logged with the SGLS and in borehole 60-04-08. A verbal notification of the preliminary log results has been provided to CHG. A follow-up letter report is being prepared to document the results and provide recommendations for monitoring frequency during waste retrieval operations.

No other special requests have been received during this reporting period for special logging investigations or other re-prioritization of boreholes for monitoring.

Future Logging Operations

Table 3 (same format as Table 2) provides a summary by tank farm of boreholes prioritized for logging planned through the end of the first quarter of FY 2002. This list includes all boreholes with a total score in excess of 35 and a next log date that is overdue or will become overdue within 90 days. A more detailed listing for the RAS logging is being prepared for project planning activities. This list will provide the projected logging for each borehole based on a planning assumption that 1.7 boreholes will be logged each working day.

References

Randall, R., and R. Price, 2001. *Analysis and Summary Report of Historical Dry Well Gamma Logs for the 241-U Tank Farm – 200 West*, RPP-7729, Rev. 0, Three Rivers Scientific, West Richland, Washington.

U.S. Department of Energy (DOE), 2001. *Hanford Tank Farms Vadose Zone Monitoring Project, Baseline Monitoring Plan*, MAC-HGLP 1.8.1, Revision 0, Grand Junction Office, Grand Junction, Colorado.

Table 2. Boreholes Logged During FY 2001

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Defector	Plume Score	Total Score	Next Log Date	RAS Event A	Comment
10-01-16	A-101	20	52	32	10	M	1	114	06/14/02	06/19/01	No apparent change
10-01-28	A-101	20	43	23		M	1	114	06/14/02	06/19/01	No apparent change
10-00-07	A-101	45	85	40		M	0	89	06/15/02	06/20/01	No apparent change
10-01-05	A-101	45	85	40		M	0	89	06/15/02	06/20/01	No apparent change
10-01-39	A-101	20	44	24	14	M	1	114	06/15/02	06/20/01	No apparent change
10-00-08	A-101	45	85	40		M	0	89	06/20/02	06/25/01	No apparent change
10-05-02	A-105	45	120	75		M	0	115	06/20/02	06/25/01	No apparent change
10-05-05	A-105	45	74	29	20	L	0	115	06/20/02	06/25/01	No apparent change
10-01-09	A-101	45	63	18		L	0	89	06/21/02	06/26/01	No apparent change
10-05-07	A-105	45	75	30		L	0	115	06/21/02	06/26/01	No apparent change
10-05-08	A-105	45	55	10		L	0	115	06/21/02	06/26/01	No apparent change
10-05-09	A-105	45	77	32		L	0	115	06/21/02	06/26/01	No apparent change
10-05-10	A-105	25	100	75	15	L	1	140	06/21/02	06/26/01	No apparent change
10-05-12	A-105	45	75	30		L	0	115	06/21/02	06/26/01	No apparent change
10-01-01	A-101	45	85	40	10	L	0	89	06/22/02	06/27/01	No apparent change
10-01-03	A-101	45	78	33		L	0	89	06/22/02	06/27/01	No apparent change
10-01-04	A-101	35	85	50	20	L	1	114	06/22/02	06/27/01	No apparent change
10-01-06	A-101	45	85	40		L	0	89	06/22/02	06/27/01	No apparent change
10-01-08	A-101	45	85	40		L	0	89	06/22/02	06/27/01	No apparent change
10-01-10	A-101	45	85	40	15	L	0	89	06/22/02	06/27/01	No apparent change
10-01-11	A-101	45	85	40		L	0	89	06/22/02	06/27/01	No apparent change
60-07-10	U-107	40	98.5	58.5		L	2	88	10/07/01	07/09/01	Apparent change (SGLS); 53-65 ft
60-08-04	U-108	35	100	65		L	1.5	57	10/07/01	07/09/01	No apparent change
60-04-03	U-104	35	75	40		L	0	44	06/16/06	07/12/01	No apparent change
60-07-01	U-107	40	98.5	58.5	10	L	2	88	10/10/01	07/12/01	Apparent change 83-88 ft
60-07-02	U-107	35	100	65		L	0.75	56	10/10/01	07/12/01	No apparent change
60-07-11	U-107	40	100	60		L	2	88	10/10/01	07/12/01	Apparent change (SGLS) 73-95 ft
60-04-08	U-104	40	90	50	10	L	2	94	10/14/01	07/16/01	Apparent change (74-78 and 84-89 ft)
60-04-10	U-104	35	90	55		L	1	69	07/11/02	07/16/01	No apparent change
60-04-12	U-104	35	75	40		L	0	44	06/20/06	07/16/01	No apparent change
60-05-04	U-105	35	73	38	10	L	1.5	51	10/14/01	07/16/01	No apparent change
60-05-05	U-105	35	75	40		L	1.5	51	07/11/02	07/16/01	No apparent change
60-10-01	U-110	40	60	20		L	0	16	10/15/01	07/17/01	No apparent change
60-10-07	U-110	35	75	40		L	1	41	07/12/02	07/17/01	No apparent change

Table 2. Boreholes Logged During FY 2001

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Defector	Plume Score	Total Score	Next Log Date	RAS Event A	Comment
60-10-07	U-110	45	65	20		S	1	41	07/12/02	07/17/01	No apparent change; requires HRLS
60-10-11	U-110	40	60	20		L	0	16	10/15/01	07/17/01	No apparent change
50-00-09	T-106	30	120	90	15	M	2	143	01/14/02	07/18/01	No apparent change
50-00-10	T-106	30	70	40		M	0	93	07/13/02	07/18/01	No apparent change
50-06-03	T-106	30	118	88		M	2	143	10/16/01	07/18/01	Apparent change at 115 ft
50-06-02	T-106	30	122	92	15	M	2	143	10/17/01	07/19/01	Apparent change at 110 ft
50-06-11	T-106	30	83	53		M	1	118	07/14/02	07/19/01	No apparent change
50-06-04	T-106	55	92.5	37.5		M	1	118	07/18/02	07/23/01	No apparent change
50-09-01	T-109	30	86	56		M	2	57	10/21/01	07/23/01	Apparent change at 85 ft
50-09-10	T-109	30	120	90	20	M	2	57	10/21/01	07/23/01	Apparent change at 76 and 94 ft
50-06-06	T-106	65	120	55	20	M	1.5	131	07/19/02	07/24/01	No apparent change
50-06-16	T-106	45	86	41		M	1.5	131	07/19/02	07/24/01	No apparent change
50-06-18	T-106	50	130	80		M	2	143	01/20/02	07/24/01	No apparent change
50-02-05	T-102	30	85	55		M	2	55	01/21/02	07/25/01	No apparent change
50-05-11	T-105	30	120	90		M	1.5	41	07/20/02	07/25/01	No apparent change
50-06-08	T-106	46	120	74		M	1.5	131	07/20/02	07/25/01	No apparent change
50-01-06	T-101	30	87	57	12	M	1.5	56	07/25/02	07/30/01	No apparent change
50-01-09	T-101	30	90	60		M	2	69	10/28/01	07/30/01	Apparent change at 86-90 ft
50-01-12	T-101	30	70	40	10	M	1	44	07/25/02	07/30/01	No apparent change
50-04-07	T-104	20	70	50			0.75	23	07/05/06	07/31/01	No apparent change
50-04-08	T-104	30	96	66	20	M	2	55	01/27/02	07/31/01	No apparent change
50-04-10	T-104	30	88	58		M	2	55	01/27/02	07/31/01	No apparent change
50-06-04	T-106	30	60	30		S	1	118	07/27/02	08/01/01	No apparent change; Require HRLS
50-06-06	T-106	30	70	40		S	1.5	131	07/27/02	08/01/01	No apparent change; Require HRLS
50-06-16	T-106	30	50	20		S	1.5	131	07/27/02	08/01/01	No apparent change
50-06-18	T-106	25	55	30		S	2	143	01/28/02	08/01/01	No apparent change
50-06-05	T-106	30	116	86		S	1.5	131	08/01/02	08/06/01	No apparent change; Require HRLS
50-06-08	T-106	30	65	35		S	1.5	131	08/01/02	08/06/01	No apparent change; Require HRLS
50-01-04	T-101	20	123	103		S	1	44	08/02/02	08/07/01	No apparent change; Require HRLS
50-06-17	T-106	30	86.5	56.5		S	1	118	08/02/02	08/07/01	No apparent change; Require HRLS
21-00-02	BX-102	35	98	63		L	1	81	08/08/02	08/13/01	No apparent change
21-27-10	BX-102	30	149	119	20	L	1.5	94	08/08/02	08/13/01	No apparent change
21-02-03	BX-102	35	99	64	15	L	2	106	02/10/02	08/14/01	No apparent change
21-02-07	BX-102	35	75	40		L	0	56	07/19/06	08/14/01	No apparent change

Table 2. Boreholes Logged During FY 2001

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Defector	Plume Score	Total Score	Next Log Date	RAS Event A	Comment
21-27-08	BX-102	35	149	114		L	2	106	02/10/02	08/14/01	No apparent change
21-02-06	BX-102	35	75	40	10	L	1.5	94	08/10/02	08/15/01	No apparent change
21-27-06	BX-102	35	75	40		L	0.75	75	07/20/06	08/15/01	No apparent change
21-27-07	BX-102	35	139	104	15	L	1.5	94	08/10/02	08/15/01	No apparent change
21-02-11	BX-102	35	75	40		L	0	56	07/21/06	08/16/01	No apparent change
21-05-03	BX-102	35	75	40		L	0	56	07/21/06	08/16/01	No apparent change
21-27-09	BX-102	35	149	114		L	1.5	94	08/11/02	08/16/01	No apparent change
21-27-02	BX-102	35	90	55		L	1.5	94	08/15/02	08/20/01	No apparent change
21-27-11	BX-102	30	138	108		L	2	106	02/16/02	08/20/01	No apparent change
41-00-08	SX-109	40	85	45		L	2	58	02/16/02	08/20/01	No apparent change
21-03-03	BX-103	35	90	55		L	2	54	02/24/02	08/28/01	No apparent change
21-27-01	BX-102	35	99	64	10	L	2	106	02/24/02	08/28/01	No apparent change
21-04-08	BX-107	35	100	65		L	1	36	08/24/02	08/29/01	No apparent change
21-07-03	BX-107	35	100	65	10	L	1	36	08/24/02	08/29/01	No apparent change
21-08-12	BX-109	35	80	45		L	1	40	08/24/02	08/29/01	No apparent change
21-12-02	BX-109	35	75	40	10	L	1	40	08/24/02	08/29/01	No apparent change
21-10-01	BX-110	35	75	40		L	1	50	08/25/02	08/30/01	No apparent change
21-10-03	BX-110	0	100	100		S	1	50	08/25/02	08/30/01	No apparent change; requires HRLS
21-02-04	BX-102	0	230	230		S	1.5	94	08/30/02	09/04/01	No apparent change; requires HRLS
21-07-06	BX-107	20	102	82		S	1	36	08/31/02	09/05/01	No apparent change; requires HRLS
21-02-01	BX-102	35	60	25		M	0.75	75	08/11/06	09/06/01	No apparent change; require M det.
21-10-05	BX-110	30	70	40		S	1	50	09/01/02	09/06/01	No apparent change
21-10-05	BX-110	65	98	33		M	1	50	09/01/02	09/06/01	No apparent change
41-01-06	SX-101	25	80	55		L	1	39	09/01/02	09/06/01	No apparent change
41-01-10	SX-101	40	80	40	10	L	1.5	51	09/02/02	09/07/01	No apparent change
41-02-02	SX-102	25	140	115		L	2	84	03/06/02	09/07/01	Possible change; possible Sr-90
41-02-11	SX-102	20	80	60		L	1.5	72	09/02/02	09/07/01	No apparent change
41-02-08	SX-102	40	80	40	15	L	1.5	72	09/05/02	09/10/01	No apparent change; possible Sr-90
41-15-02	SX-115	40	74	34		L	0	40	08/15/06	09/10/01	No apparent change
41-15-10	SX-115	40	85	45		L	0	40	08/15/06	09/10/01	No apparent change
41-10-01	SX-110	40	80	40	10	L	2	54	03/12/02	09/13/01	No apparent change
41-12-10	SX-112	40	73	33	13	L	0.75	46	08/18/06	09/13/01	No apparent change
41-15-03	SX-115	40	76	36		L	0	40	08/18/06	09/13/01	No apparent change
41-15-05	SX-115	40	74	34		L	0	40	08/18/06	09/13/01	No apparent change

Table 2. Boreholes Logged During FY 2001

<i>Borehole Number</i>	<i>Tank</i>	<i>Top</i>	<i>Bottom</i>	<i>Footage</i>	<i>Rerun Footage</i>	<i>RAS Defector</i>	<i>Plume Score</i>	<i>Total Score</i>	<i>Next Log Date</i>	<i>RAS Event A</i>	<i>Comment</i>
41-07-05	SX-107	40	75	35		L	1.5	42	09/12/02	09/17/01	No apparent change
41-07-08	SX-107	40	76	36		L	2	54	03/16/02	09/17/01	Log with medium detector
41-08-04	SX-108	35	76	41	10	L	1.5	52	09/12/02	09/17/01	No apparent change
41-11-09	SX-111	40	75	35		L	1.5	43	09/12/02	09/17/01	No apparent change
41-09-03	SX-109	40	55	15		L	1.5	46	09/15/02	09/20/01	No apparent change
41-11-10	SX-111	40	62	22		L	2	56	03/20/02	09/21/01	No apparent change
41-11-10	SX-111	85	95	10		L	2	56	03/20/02	09/21/01	No apparent change
41-15-07	SX-115	40	90	50	10	L	1	65	09/16/02	09/21/01	No apparent change
41-15-09	SX-115	40	75	35	10	L	0	40	08/26/06	09/21/01	No apparent change
41-08-02	SX-108	40	74.5	34.5		M	1	40	09/19/02	09/24/01	No apparent change
41-11-10	SX-111	70	90	20		M	2	56	03/23/02	09/24/01	No apparent change
41-07-05	SX-107	45	65	20		S	1.5	42	09/20/02	09/25/01	No apparent change
41-08-07	SX-108	40	65	25		S	1.5	52	09/20/02	09/25/01	No apparent change; requires HRLS
41-11-10	SX-111	60	75	15		S	2	56	03/24/02	09/25/01	No apparent change; requires HRLS
41-07-07	SX-107	40	74.5	34.5		S	2	54	03/25/02	09/26/01	No apparent change; requires HRLS
41-08-11	SX-108	40	75	35		S	1	40	09/21/02	09/26/01	No apparent change; requires HRLS
41-09-03	SX-109	50	74	24		S	1.5	46	09/21/02	09/26/01	No apparent change; requires HRLS

Table 3. Boreholes Projected for Logging During First Quarter of FY 2002

<i>Borehole Number</i>	<i>Tank</i>	<i>Top</i>	<i>Bottom</i>	<i>Footage</i>	<i>Rerun Footage</i>	<i>RAS Detector</i>	<i>Plume Score</i>	<i>Total Score</i>	<i>Next Log Date</i>	<i>RAS Event A</i>	<i>Comment</i>
10-03-07	A-103	45	125	80			1	37	10/20/97		
11-01-01	AX-101	45	85	40			0	66	07/28/01		BE ¹ - Cs-137
11-01-02	AX-101	45	85	40			0	66	07/27/01		BE - Cs-137
11-01-04	AX-101	45	85	40			0	66	07/28/01		BE - Cs-137
11-01-05	AX-101	45	85	40			0	66	07/27/01		
11-01-07	AX-101	45	85	40			0	66	07/26/01		BE - Cs-137
11-01-09	AX-101	45	85	40			0	66	07/31/01		BE - Cs-137
11-01-10	AX-101	45	73	28			0	66	08/01/01		BE - Cs-137
11-01-11	AX-101	45	85	40			0	66	08/02/01		BE - Cs-137
11-03-02	AX-103	20	90	70			1	39	09/08/97		Cs-137 at 35 ft
20-00-05	B-101	35	110	75			1	46	08/16/98		Double casing
20-01-01	B-101	35	75	40			1	46	08/15/98		Hist.-short life at 54 ft
20-01-06	B-101	25	60	35			1	46	08/21/98		
20-03-06	B-103	35	75	40			1	38	04/30/00		BE - Cs-137; Hist. at 37 ft
20-07-02	B-107	35	100	65			1	45	11/27/99		BE - Cs-137 63-76 ft
20-07-11	B-107	35	80	45			1	45	05/05/00		Possible Sr-90 at 72 ft
20-09-06	B-109	35	100	65			1	38	09/14/98		
20-12-03	B-109	35	100	65			1	38	11/01/99		BE - Cs-137; Hist. 60-90 ft
20-10-02	B-110	20	98	78			1	37	04/28/00		Possible Sr-90; BE - Cs-137
20-10-07	B-110	35	75	40			1	37	11/19/99		Hist. at 47 ft
20-10-12	B-110	20	120	100			1	37	10/22/99		BE - Cs-137 - 108-120 ft; Sr-90
22-00-02	BY-103	40	99	59			2	63	01/31/96		Instability 64-96 ft; Sb-125 - 1 pCi/g
22-00-03	BY-103	40	146	106			1.5	50	07/27/96		BE - Cs-137; Sb-125 - 2 pCi/g
22-03-04	BY-103	40	100	60			1.5	50	08/01/96		BE - Cs-137; Sb-125 - 1 pCi/g
22-03-05	BY-103	20	99	79			1.5	50	07/19/96		BE - Cs-137 below 50 ft
22-03-05	BY-103	22	50	28			1.5	50	11/23/00		HRSL
22-03-06	BY-103	40	100	60			1	38	03/25/00		TGA ² 20-30 ft; Sb-125 - 10 pCi/g
22-03-07	BY-103	40	99	59			1	38	08/05/96		BE - Cs-137
22-03-08	BY-103	40	99	59			1	38	08/10/96		BE - Cs-137

¹ BE -- borehole effect

² TGA -- total gamma anomaly

Table 3. Boreholes Projected for Logging During First Quarter of FY 2002

Borehole Number	Tank	Top	Bottom	Footage	Rerun Footage	RAS Detector	Plume Score	Total Score	Next Log Date	RAS Event A	Comment
22-03-09	BY-103	30	97	67			1	38	11/23/00		BE - Cs-137
22-05-01	BY-105	40	98	58			1.5	62	07/14/96		BE - Cs-137; Co-60 82-98 ft
22-05-09	BY-105	40	98	58			1.5	62	07/14/96		BE - Cs-137; Co-60 60-98 ft
22-06-01	BY-106	40	80	40			1	51	08/04/96		BE - Cs-137; Co-60 45-75 ft
22-06-05	BY-106	20	98	78			2	76	09/28/99		BE - Cs-137; Instability
22-06-07	BY-106	35	131	96			1.5	64	08/15/96		BE - Cs-137; Co-60 50-80 & 125-130 ft
22-06-09	BY-106	40	97	57			0.5	39	07/22/00		BE - Cs-137; Co-60 72-90 ft
22-07-01	BY-107	40	98	58			1	43	08/11/96		BE - Cs-137; Co-60 45-98 ft
22-07-02	BY-107	30	100	70			2	68	02/24/96		BE - Cs-137; Co-60 instability
22-07-05	BY-107	30	97	67			2	68	02/25/96		BE - Cs-137; Co-60 instability
22-07-07	BY-107	40	99	59			2	68	02/27/96		BE - Cs-137; Co-60 instability
22-07-09	BY-107	20	99	79			1.5	55	08/26/96		BE - Cs-137
22-08-01	BY-108	25	99	74			1.5	61	08/30/96		BE - Cs-137; Co-60 instability 59-95 ft
22-08-02	BY-108	25	102	77			2	74	03/04/96		BE - Cs-137; Co-60 instability 44-100 ft
22-08-05	BY-108	35	98	63			2	74	09/26/95		BE - Cs-137; TGA 60-82; unstable
22-08-06	BY-108	40	99	59			1.5	61	03/24/00		BE - Cs-137; TGA 20-30 ft
22-08-07	BY-108	40	100	60			1	49	08/23/96		BE - Cs-137
22-08-12	BY-108	30	90	60			2	74	02/28/96		BE - Cs-137; Unstable 60-70 ft
22-10-05	BY-110	40	100	60			1.5	41	09/07/96		BE - Cs-137
22-10-07	BY-110	40	80	40			2	53	09/25/99		BE - Cs-137; Instability 45-65 ft
30-01-06	C-101	30	70	40			1	43	03/23/98		
30-01-09	C-101	20	70	50			1	43	03/19/98		
30-03-01	C-103	30	125	95			1	54	04/12/98		BE - Cs-137
30-03-03	C-103	30	98	68			1	54	04/06/98		BE - Cs-137
30-03-09	C-103	30	98	68			1	54	04/03/98		BE - Cs-137
30-05-02	C-105	30	90	60			1	37	01/31/98		BE - Cs-137
30-05-03	C-105	30	90	60			1	37	01/29/98		BE - Cs-137
30-05-04	C-105	30	118	88			1	37	01/24/98		BE - Cs-137
30-05-05	C-105	30	98	68			1	37	01/24/98		BE - Cs-137

¹ BE -- borehole effect

² TGA -- total gamma anomaly

Table 3. Boreholes Projected for Logging During First Quarter of FY 2002

<i>Borehole Number</i>	<i>Tank</i>	<i>Top</i>	<i>Bottom</i>	<i>Footage</i>	<i>Rerun Footage</i>	<i>RAS Detector</i>	<i>Plume Score</i>	<i>Total Score</i>	<i>Next Log Date</i>	<i>RAS Event A</i>	<i>Comment</i>
30-05-07	C-105	30	67	37			1	37	12/14/00		
30-05-08	C-105	30	49	19			1	37	01/19/98		BE - Cs-137
30-05-10	C-105	10	70	60			1	37	01/10/98		BE - Cs-137
30-00-01	C-106	30	67	37			1	38	04/09/98		BE - Cs-137
30-06-04	C-106	20	100	80			1	38	01/31/98		BE - Cs-137
30-06-09	C-106	25	80	55			1.5	50	01/29/98		BE - Cs-137
30-06-10	C-106	30	129	99			2	63	08/30/99		BE - Cs-137
30-06-12	C-106	15	99	84			1.5	50	01/22/98		BE - Cs-137
30-09-06	C-109	30	98	68			1.5	42	03/27/98		BE - Cs-137
40-02-03	S-102	20	80	60			1	53	05/18/97		
40-02-07	S-102	20	80	60			1	53	05/24/97		
40-02-08	S-102	20	80	60			1	53	09/21/00		
40-03-05	S-103	40	80	40			1	39	06/02/97		BE - Cs-137
40-04-05	S-104	35	100	65			1	49	09/18/00		Stability not determined
40-04-07	S-104	35	80	45			1	49	05/19/97		
40-04-08	S-104	20	50	30			1	49	05/19/97		
40-07-01	S-107	35	80	45			1	48	06/05/97		Assuming 40-04-05 is not stable
40-00-06	S-111	40	80	40			0	39	06/28/01		BE - Cs-137
40-11-01	S-111	40	80	40			0	39	06/26/01		
40-11-05	S-111	40	80	40			0	39	06/30/01		
40-11-07	S-111	35	80	45			0	39	06/22/01		BE - Cs-137
40-11-08	S-111	40	80	40			0	39	06/23/01		
40-11-09	S-111	40	80	40			0	39	07/04/01		
41-09-04	SX-109	40	102	62			2	58	03/08/00		Not logged due to borehole contamination
41-09-07	SX-109	40	72	32			2	58	03/11/00		
41-09-09	SX-109	40	95	55			2	58	05/13/00		
41-12-02	SX-112	40	122	82			1.5	65	09/07/00		
41-12-03	SX-112	40	75	35			1.5	65	09/10/00		
50-01-09	T-101	30	90	60	M		2	69	10/28/01	07/30/01	Apparent change at 86-90 ft

¹ BE -- borehole effect

² TGA -- total gamma anomaly

Table 3. Boreholes Projected for Logging During First Quarter of FY 2002

<i>Borehole Number</i>	<i>Tank</i>	<i>Top</i>	<i>Bottom</i>	<i>Footage</i>	<i>Rerun Footage</i>	<i>RAS Detector</i>	<i>Plume Score</i>	<i>Total Score</i>	<i>Next Log Date</i>	<i>RAS Event A</i>	<i>Comment</i>
50-06-02	T-106	30	122	92	15	M	2	143	10/17/01	07/19/01	Apparent change at 110 ft
50-06-03	T-106	30	118	88		M	2	143	10/16/01	07/18/01	Apparent change at 115 ft
50-07-07	T-107	30	70	40			1	42	04/07/00		No log - water filled (06/18/01)
50-09-01	T-109	30	86	56		M	2	57	10/21/01	07/23/01	Apparent change at 85 ft
50-09-10	T-109	30	120	90	20	M	2	57	10/21/01	07/23/01	Apparent change at 76 and 94 ft
51-01-02	TX-101	40	80	40			1.5	41	01/24/00		
51-03-01	TX-103	40	80	40			1	36	12/22/96		BE - Cs-137
51-03-09	TX-103	40	100	60			2	61	07/26/99		
51-03-11	TX-103	40	100	60			1	36	12/14/96		
51-03-12	TX-103	40	100	60			1	36	12/16/96		BE - Cs-137; Unstable
51-04-02	TX-104	40	80	40			1.5	46	01/22/00		Sb-125
51-04-05	TX-104	40	90	50			2	58	07/25/99		Unstable
51-04-06	TX-104	40	80	40			1.5	46	01/21/00		
51-05-01	TX-105	40	80	40			1	39	01/22/00		BE - Cs-137
51-05-03	TX-105	25	80	55			1.5	51	01/22/00		Possible Sr-90 at 32 ft
51-05-05	TX-105	40	80	40			2	64	07/28/99		Sb-125
51-05-07	TX-105	40	80	40			2	64	07/28/99		BE - Cs-137
51-16-04	TX-116	35	80	45			1	44	01/02/97		
52-03-06	TY-103	40	100	60			2	55	10/27/96		Unstable, 44-98 ft
52-05-07	TY-105	40	97	57			2	85	08/03/99		
52-06-04	TY-106	40	80	40			1.5	55	01/27/00		
52-06-05	TY-106	40	148	108			2	68	08/02/99		Unstable
52-06-06	TY-106	40	100	60			1.5	55	01/27/00		
52-06-07	TY-106	200	238	38			1	43	01/27/00		BE - Cs-137; Co-60 in groundwater
60-04-08	U-104	40	90	50	10	L	2	94	10/14/01	07/16/01	Apparent change (74-78 and 84-89 ft)
60-05-04	U-105	35	73	38	10	L	1.5	51	10/14/01	07/16/01	No apparent change
60-07-01	U-107	40	98.5	58.5	10	L	2	88	10/10/01	07/12/01	Apparent change 83-88 ft
60-07-02	U-107	35	100	65		L	0.75	56	10/10/01	07/12/01	No apparent change
60-07-10	U-107	40	98.5	58.5		L	2	88	10/07/01	07/09/01	Apparent change (SGLS) 53-65 ft

¹ BE -- borehole effect

² TGA -- total gamma anomaly

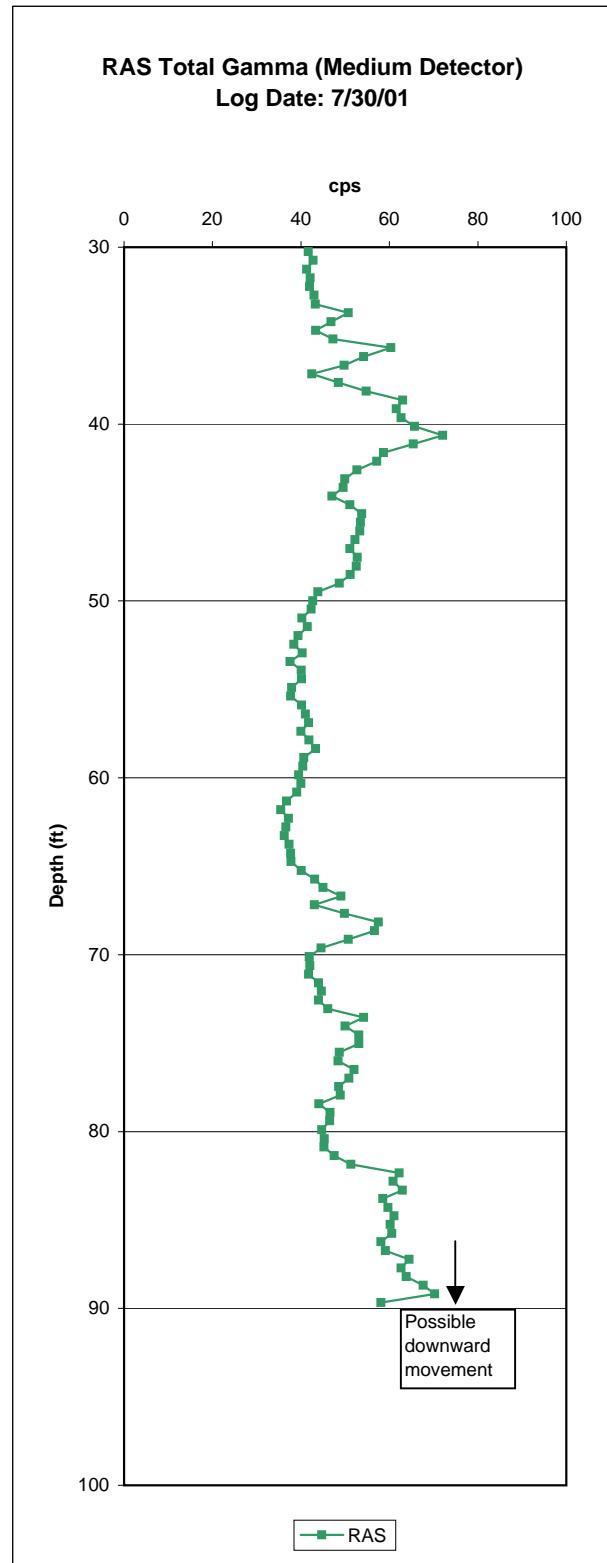
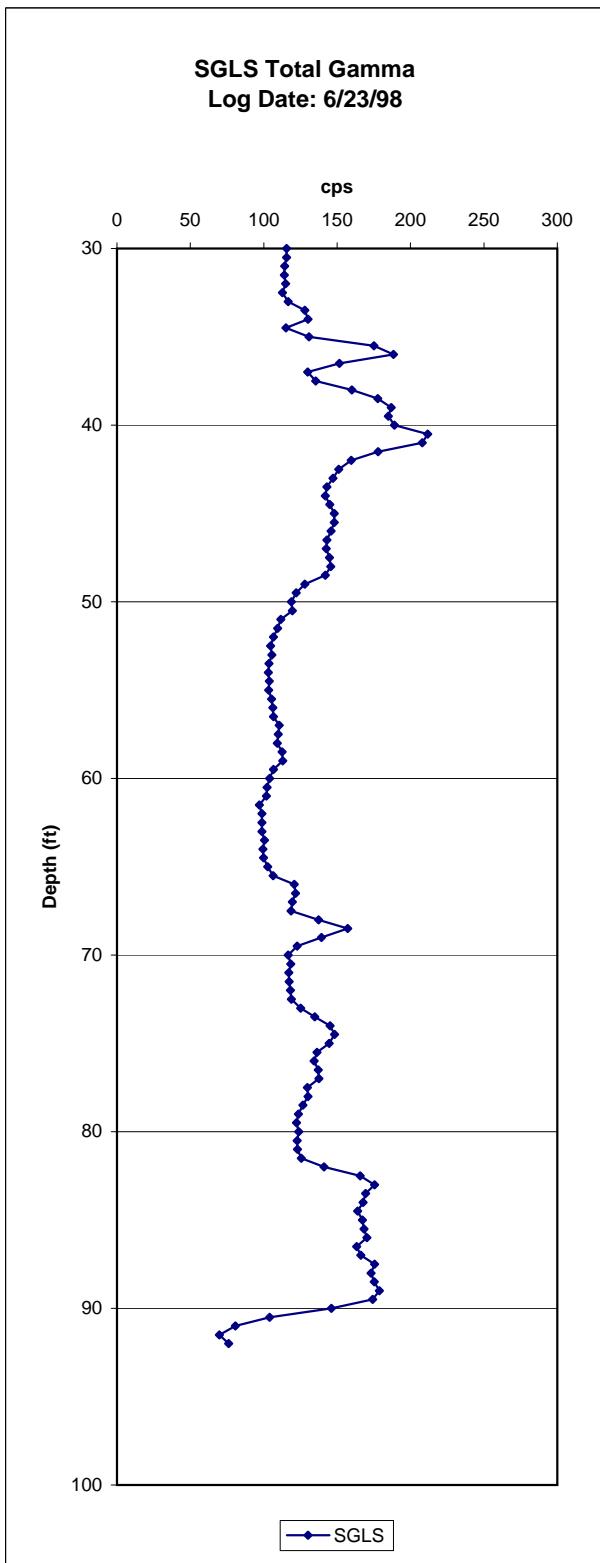
Table 3. Boreholes Projected for Logging During First Quarter of FY 2002

<i>Borehole Number</i>	<i>Tank</i>	<i>Top</i>	<i>Bottom</i>	<i>Footage</i>	<i>Rerun Footage</i>	<i>RAS Detector</i>	<i>Plume Score</i>	<i>Total Score</i>	<i>Next Log Date</i>	<i>RAS Event A</i>	<i>Comment</i>
60-07-11	U-107	40	100	60		L	2	88	10/10/01	07/12/01	Apparent change (SGLS) 73-95 ft
60-08-04	U-108	35	100	65		L	1.5	57	10/07/01	07/09/01	No apparent change
60-10-01	U-110	40	60	20		L	0	16	10/15/01	07/17/01	No apparent change
60-10-11	U-110	40	60	20		L	0	16	10/15/01	07/17/01	No apparent change
60-11-07	U-111	35	75	40			1	37	04/21/00		
60-11-12	U-111	35	75	40			1	37	12/10/00		
60-12-01	U-112	35	125	90			1	37	12/02/00		

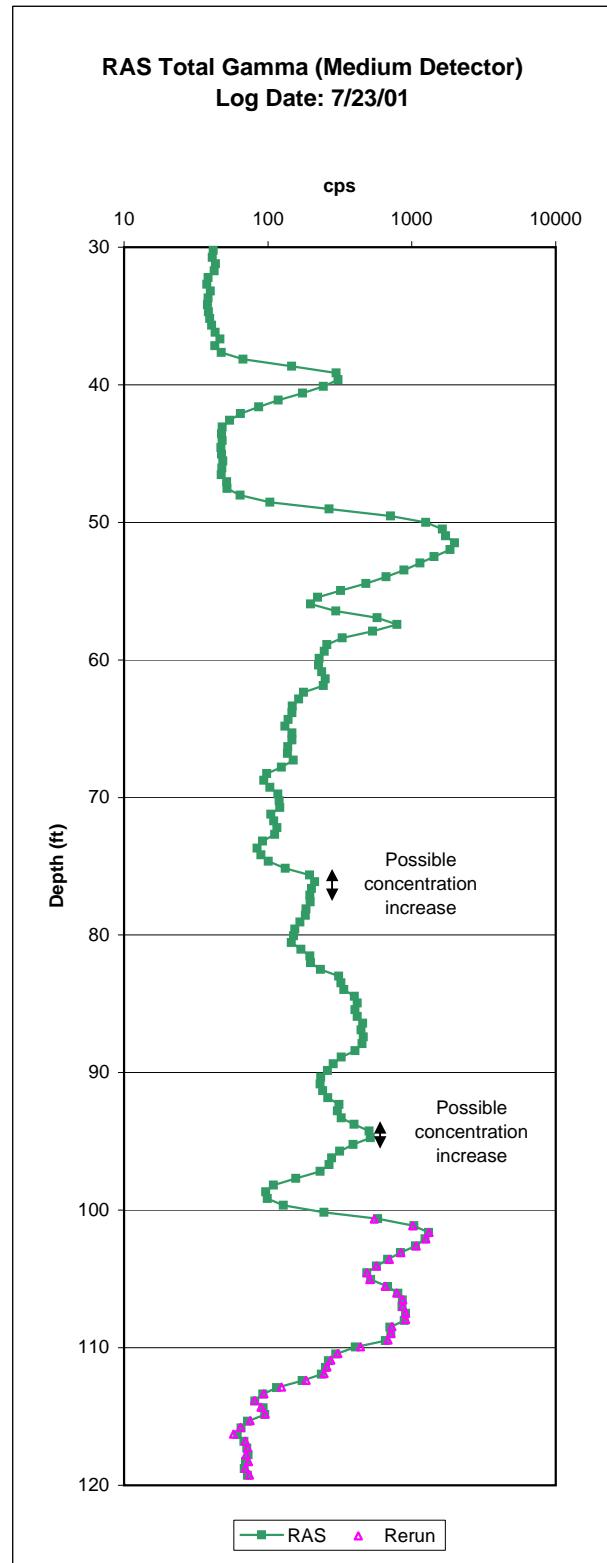
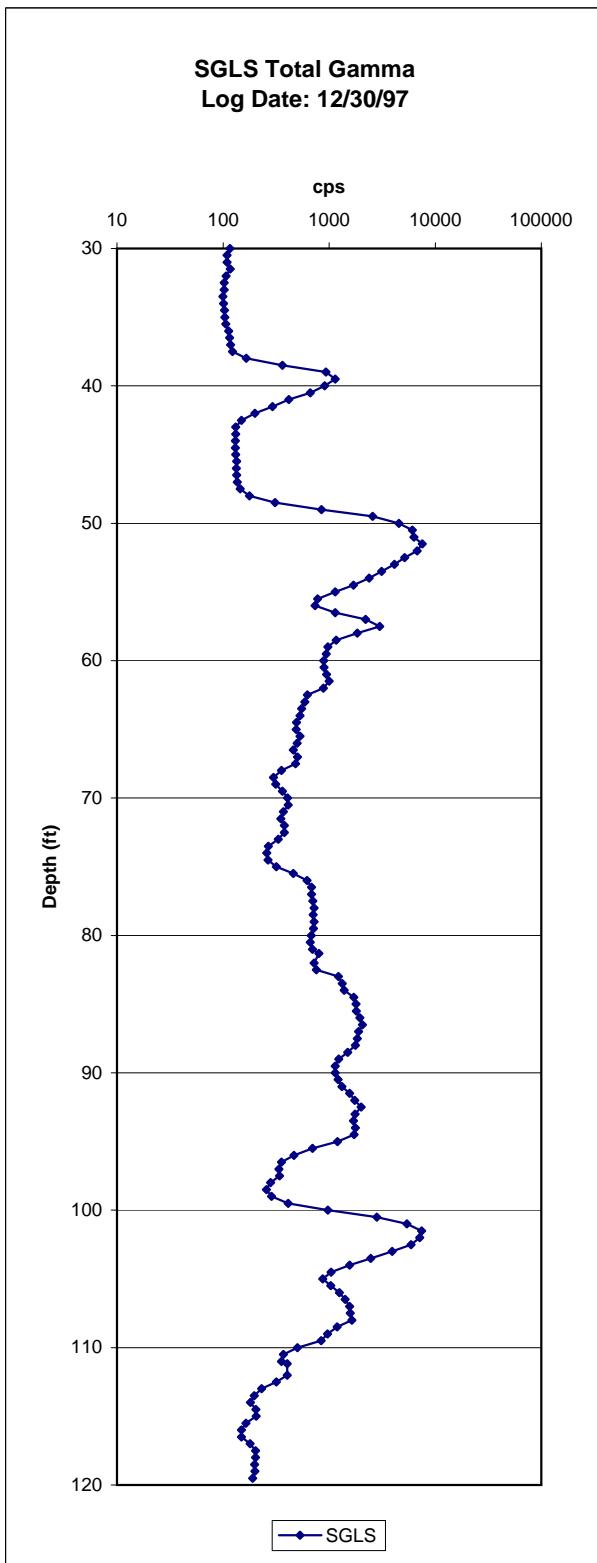
¹ BE -- borehole effect

² TGA -- total gamma anomaly

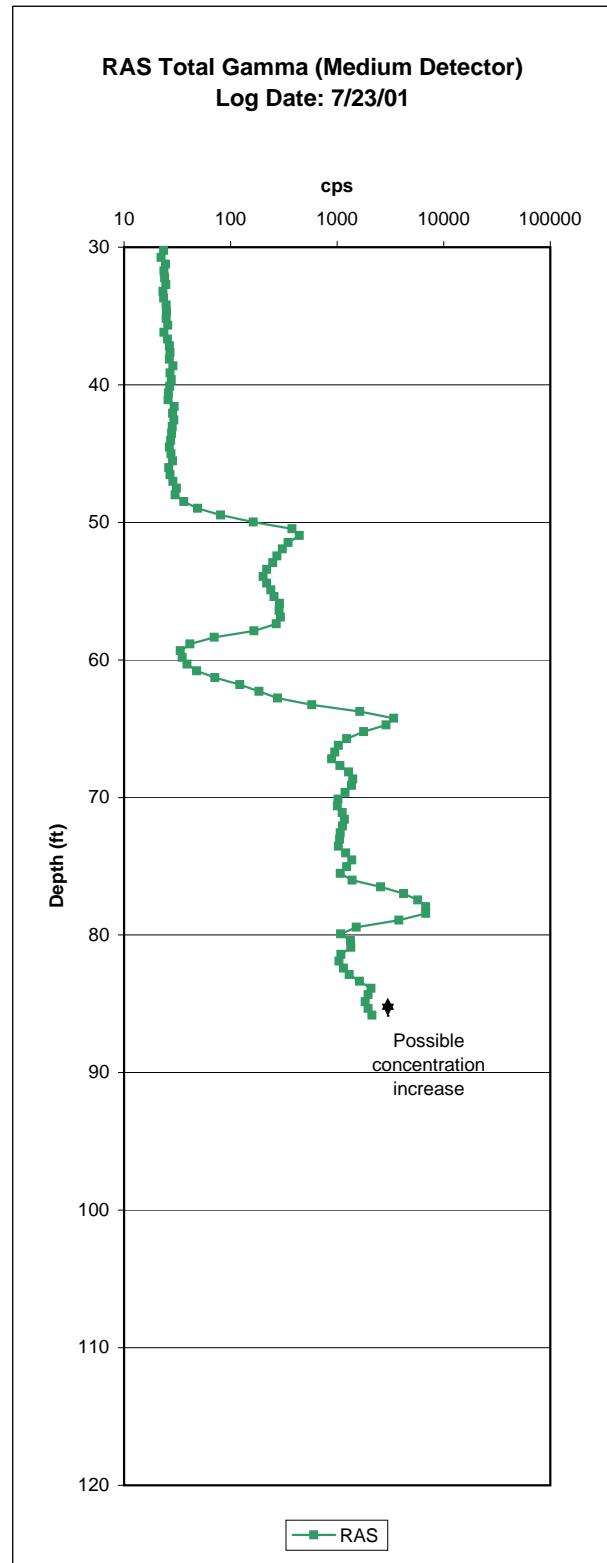
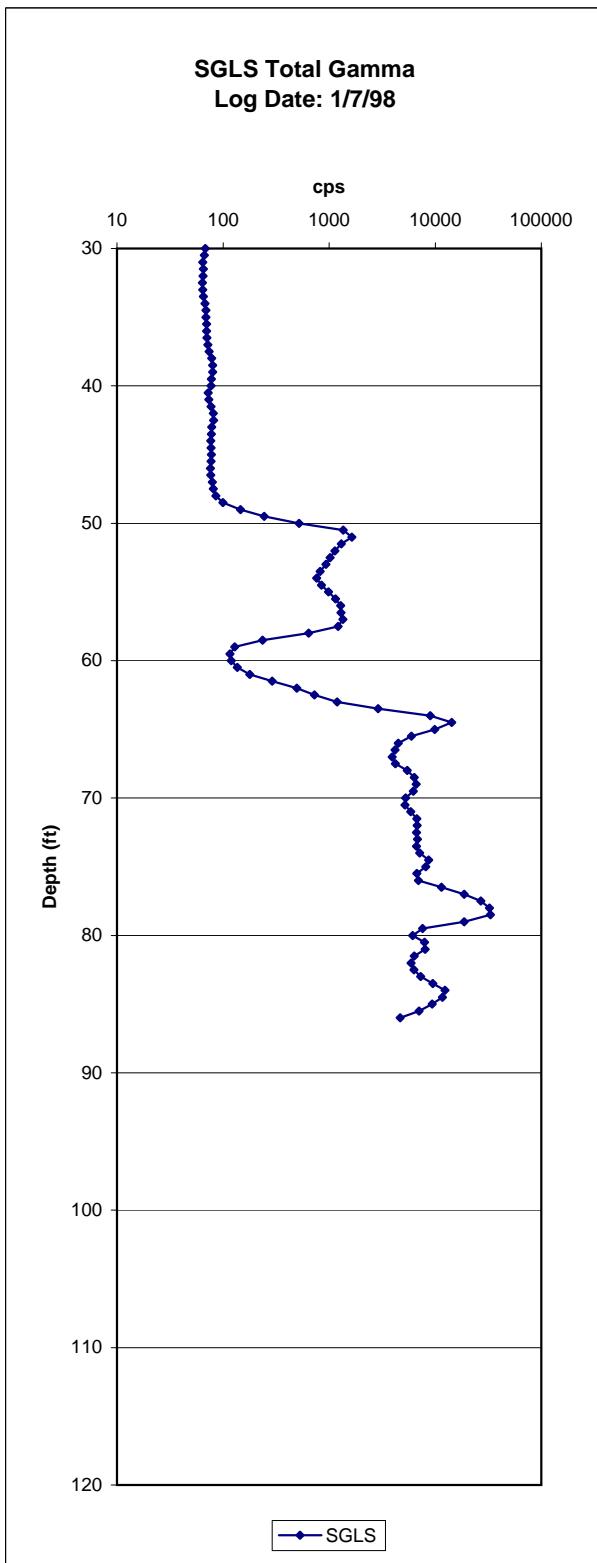
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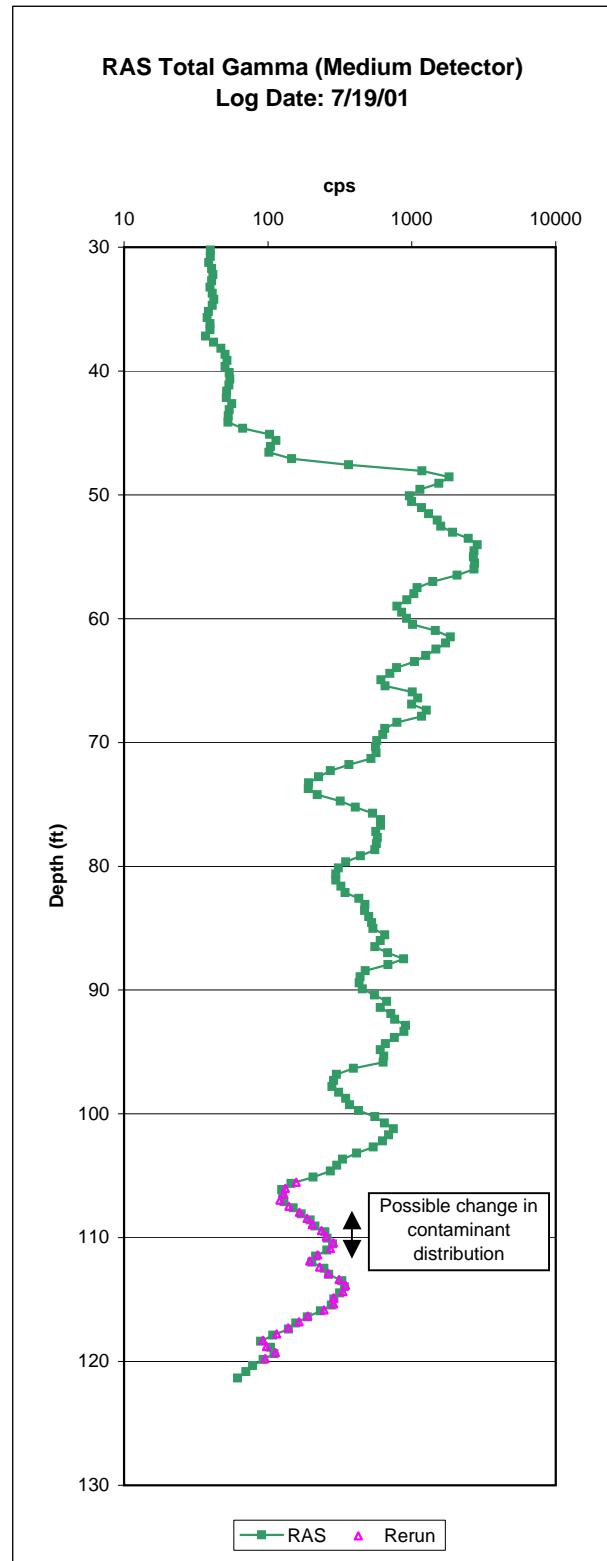
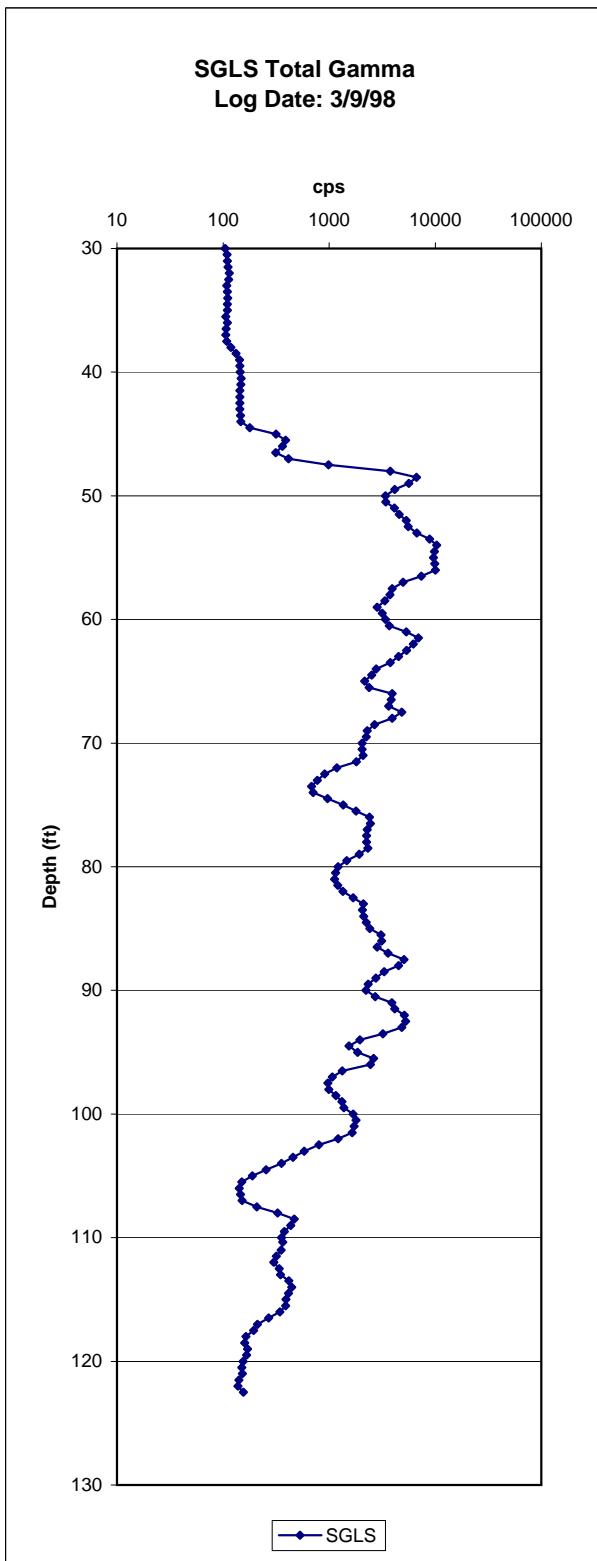
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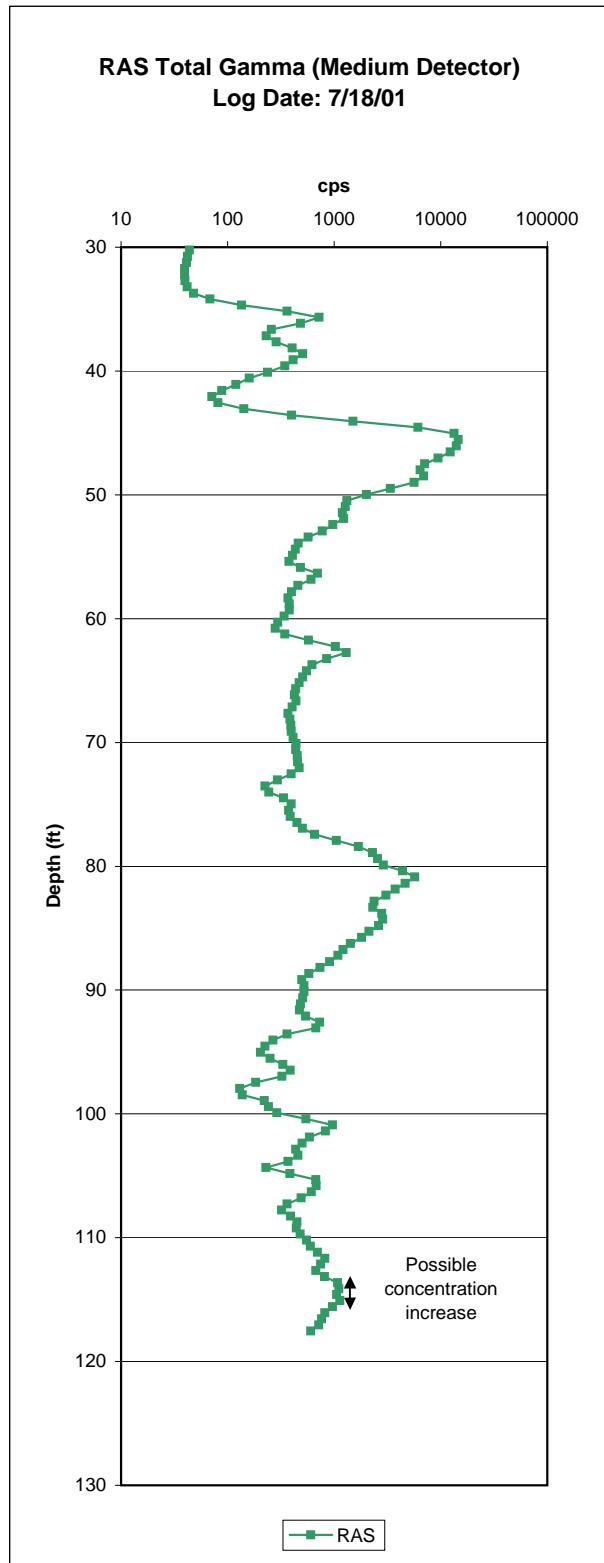
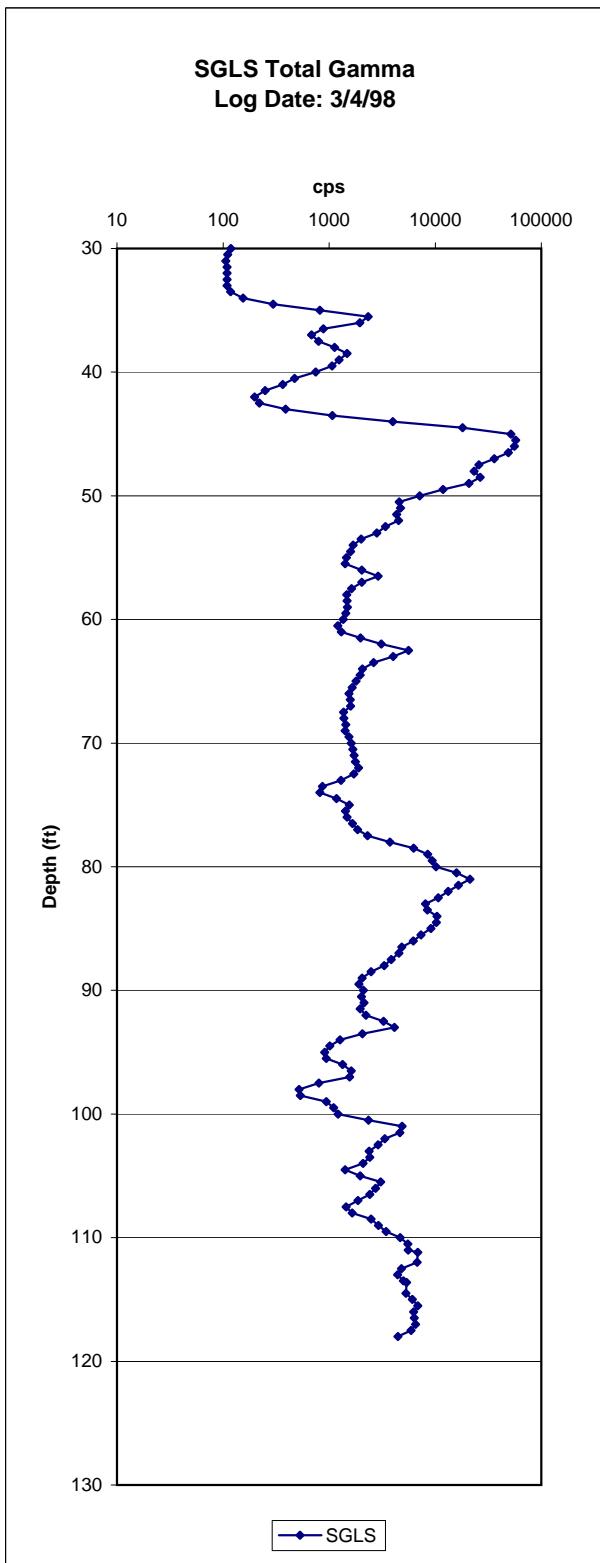
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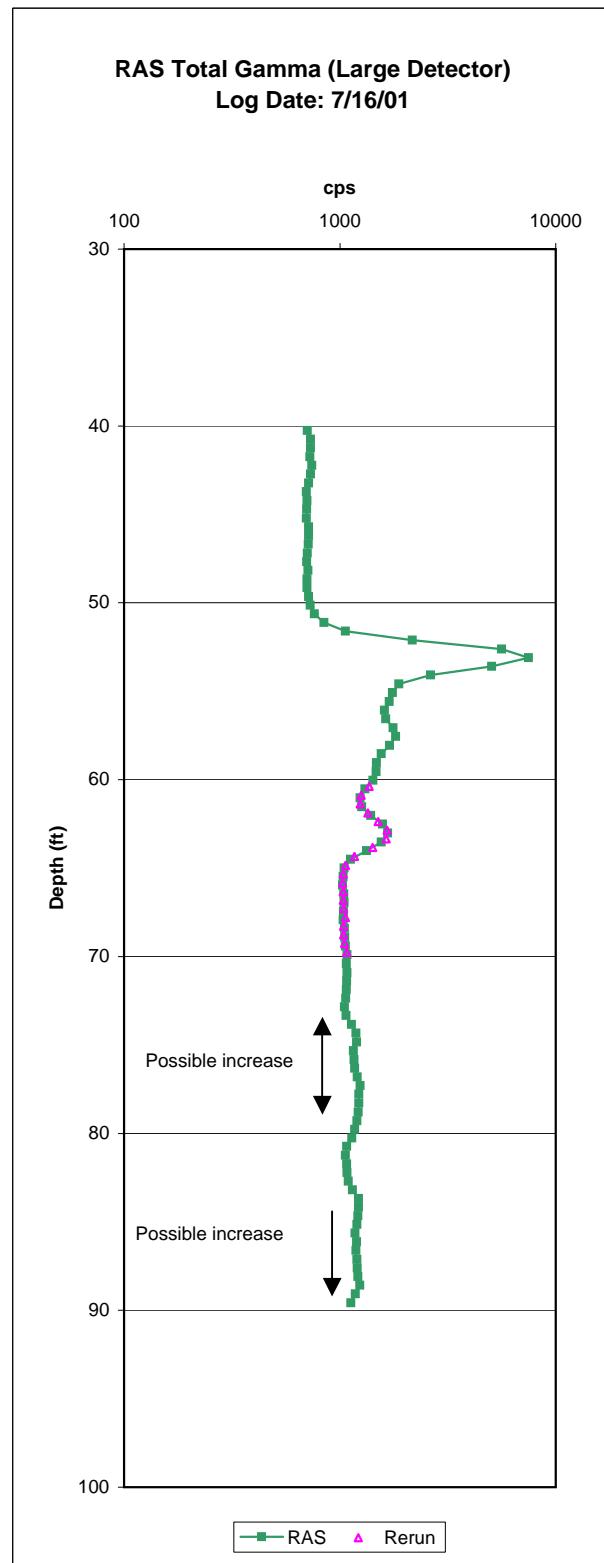
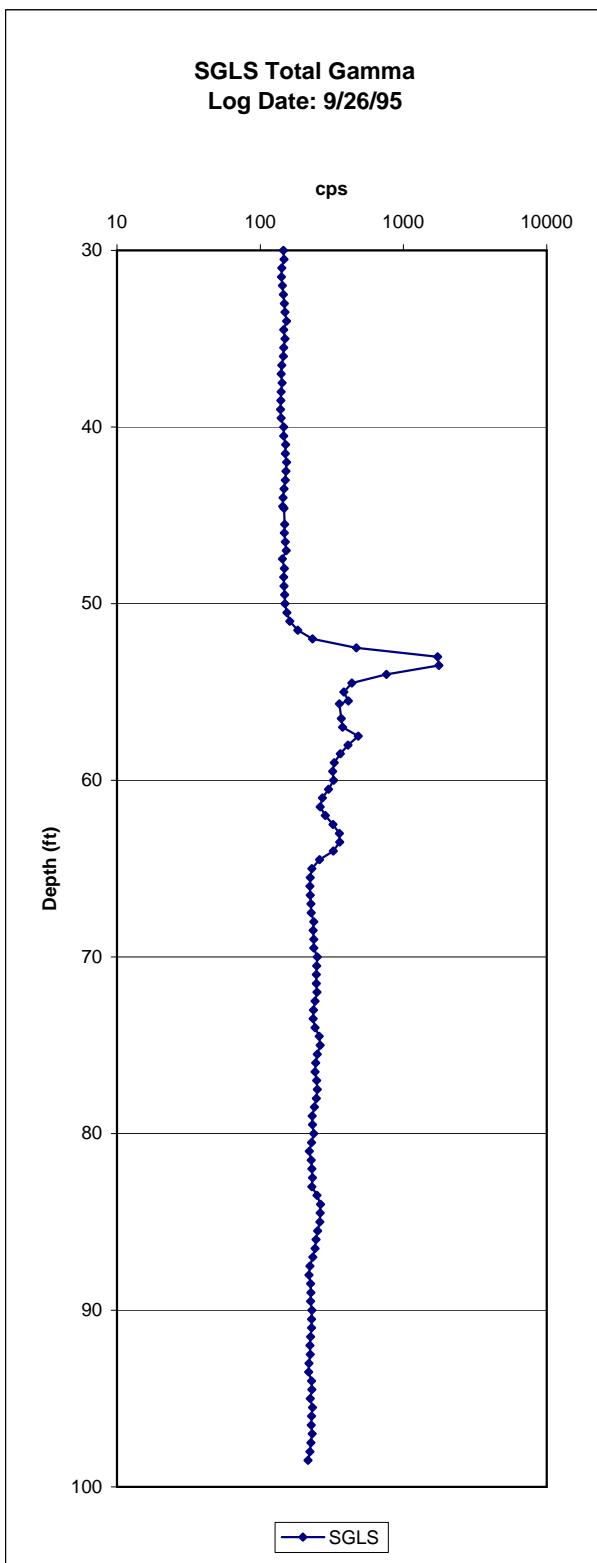
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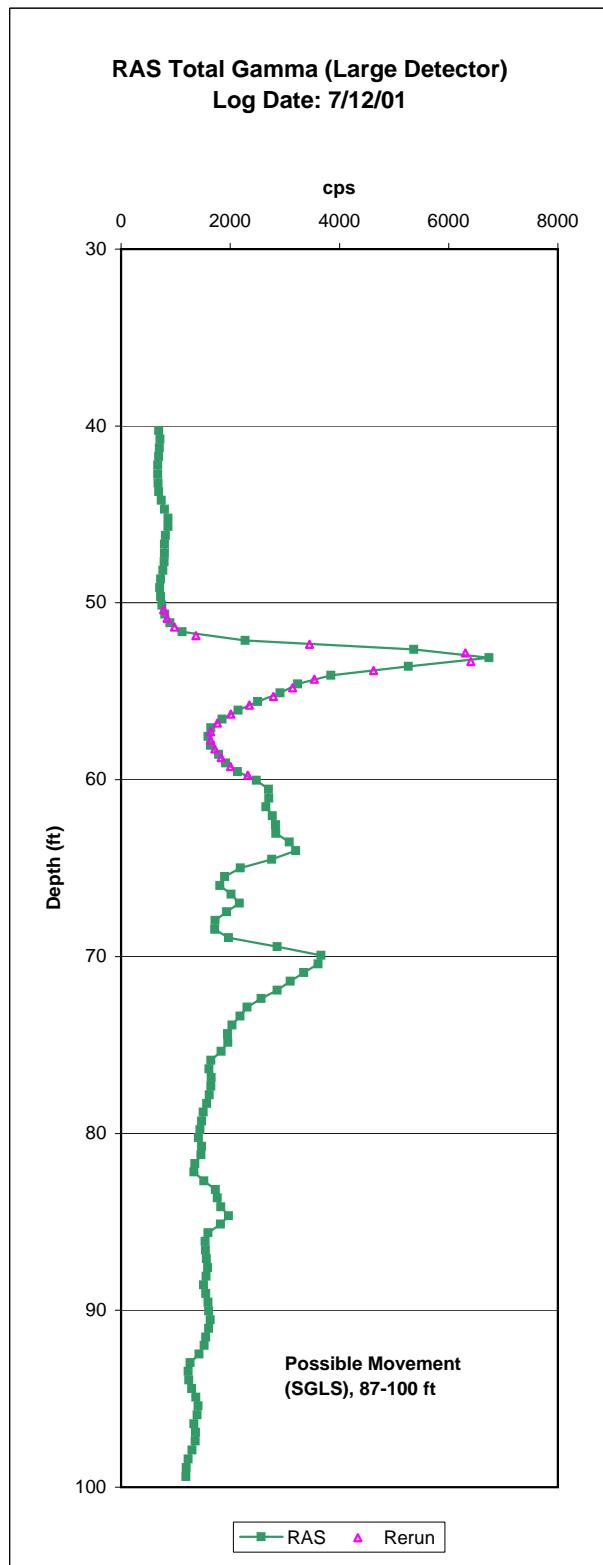
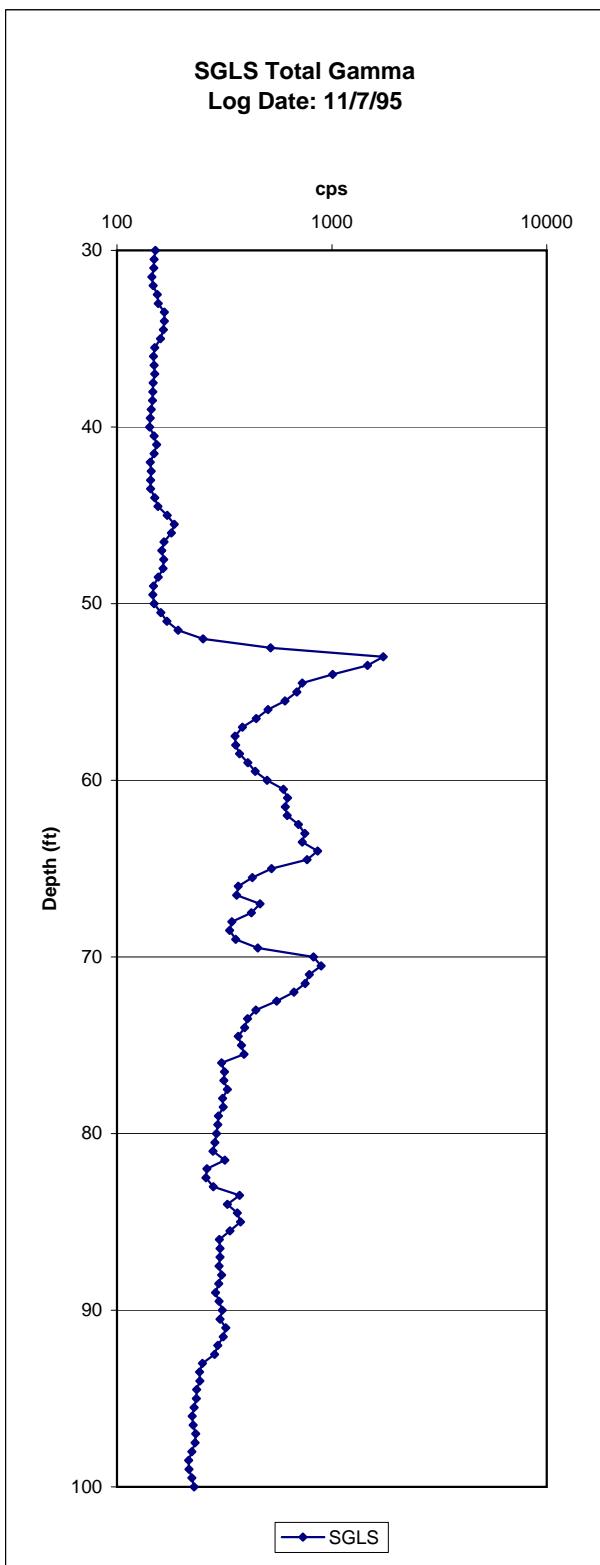
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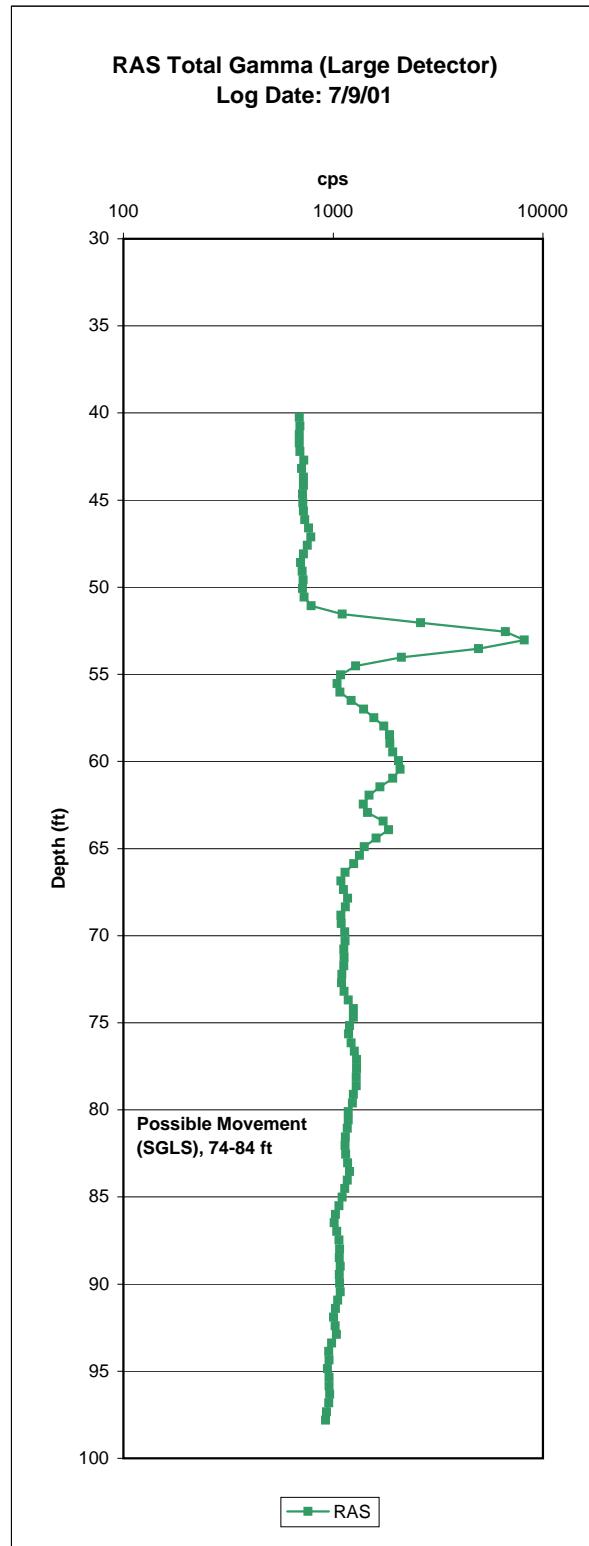
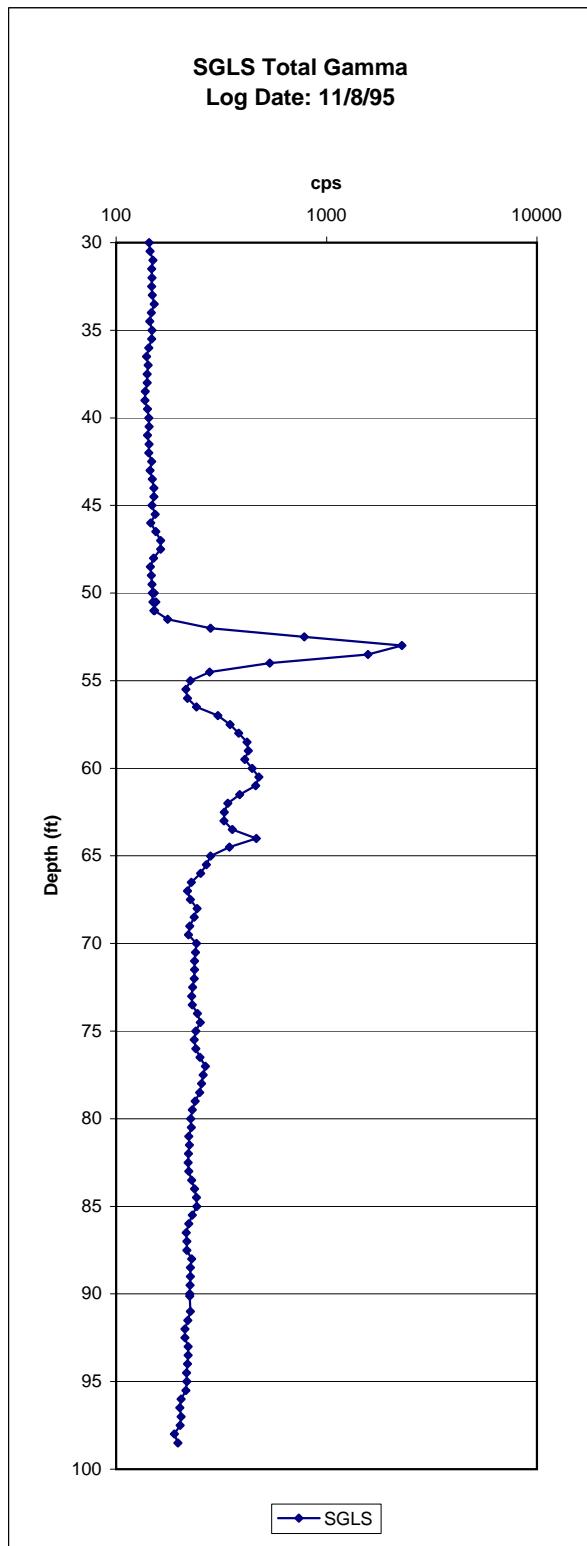
Borehole 60-04-08



Borehole 60-07-11



Borehole 60-07-10



Borehole 60-07-01

